



**L3HARRIS™**

FAST. FORWARD.

# **MAXIMIZED MISSION** **CONNECTIVITY**

RF-7800I Tactical Networking  
Intercom System





# SMALLEST, LIGHTEST, MOST POWER-EFFICIENT INTERCOM SYSTEM AVAILABLE TODAY

Tough terrain and noisy environments are no match for the L3Harris RF-7800I Tactical Networking Intercom System. This Victory/GVA-capable solution delivers clear voice and data between crew members operating within the limited confines of military vehicles. The RF-7800I supports HF, VHF, UHF, SPR, LMR and BGAN satellite communications technology, reliably connecting dismounted personnel, Tactical Operations Centers (TOC), maritime and vehicular units.

The RF-7800I is interoperable with the L3Harris Falcon® family of tactical radios, as well as other military, government and commercial devices. The modular, customizable design makes the system easy to install and configure based on the specific needs of the mission.

## CENTRAL UNIT

### The heart of the system

The L3Harris RF-7800I-CU Central Unit is the foundation of the networking intercom system. Advanced technology eliminates background noise, delivering clear voice communications and data-sharing capabilities for up to eight Crew Stations and ten Combat Net Radios. The vehicle's system status, Crew Station controls and indicators are also monitored by the unit for greater control of the system. A "light" version is available to support voice-only communication between Crew Stations and radio transceivers.



- > Simple, easy-to-install four-wire highway cable connects the Central Unit and Crew Stations, reducing unnecessary cabin clutter
- > Power-efficient, modular system for mission flexibility
- > Software-configurable and upgradeable through a simple, PC-based user interface
- > More efficient, simultaneous data and voice through a single connection for up to ten radios
- > Provides power, programming, and configuration capabilities to Crew Stations and Active Noise Reduction headsets
- > Integrates Battle Management System and Situational Awareness applications
- > Provides duplex streams of 64 kbps digitized PCM voice channels, and duplex streams of digital synchronous communication with data and control signals of the serial asynchronous ports



## RADIO GATEWAY

### Add radios quickly and affordably

The L3Harris RF-7800I-RG200 allows users to add more radios to the Intercom, without the need for another Central Unit. The two-channel Radio Gateway features flexible Ethernet connectivity with voice-to-data communications via radio over IP. The gateway fully integrates radios into the RF-7800I, supporting remote control capabilities.

- > Ruggedized for harsh environments; black-out mode compatible
- > Software defined with a built-in Web User Interface for simplified configuration and upgrades

\* Refer to radio interoperability list

<b>Input Voltage Range</b>	18-36 VDC
<b>Current Efficiency (Max)</b>	300 mA + each connected component
<b>Dimensions (HxWxD)</b>	3.33 x 6.01 x 10.07 in (8.46 x 15.29 x 25.6 cm)
<b>Weight</b>	4.8 lb (2.2 kg)

<b>Input Voltage Range</b>	10.5-36 VDC
<b>Current Efficiency (Max)</b>	< 2 watts
<b>Dimensions (HxWxD)</b>	1.72 x 7.5 x 4.5 in (4.37 x 19.05 x 11.43 cm)
<b>Weight</b>	2.9 lb (1.36 kg)



### KEYPAD DISPLAY UNIT

#### Intuitive interface with flexible functionality

The L3Harris RF-7800I-KD Keypad Display Unit provides real-time Command and Control of the intercom system and any connected radios. L3Harris Falcon radio users can remotely control radio parameters, navigate through presets, issue calls to radio network users, display GPS information and control power configuration through a customizable display.

- > Remote radio control of L3Harris radios from Crew Station at distances of up to 2 km\*
- > High-resolution OLED screen
- > Simple, push-button access to intercom and radio channels
- > Audio feedback language options
- > Software configurable design, function and position of icons

\* Refer to radio interoperability list

<b>Input Voltage Range</b>	18-36 VDC or Central Unit
<b>Current Efficiency (Max)</b>	80 mA
<b>Dimensions (HxWxD)</b>	2.07 x 4.96 x 6.77 in (5.28 x 12.6 x 17.2 cm)
<b>Weight</b>	~2 lb (<1 kg)



### ROTARY DIAL UNIT

#### Simplified communications with the turn of a dial

The L3Harris RF-7800I-RD Rotary Dial Unit allows users to quickly and easily communicate with their team, make a phone call or respond to an alarm.

- > Remote radio control of L3Harris radios from Crew Station at distances of up to 2 km\*
- > 16 pre-programmable operation modes
- > Audible messaging technology eliminates the need for operators to look at a dial to know what channel they are on
- > Status indicators at each dial position to identify radios in use

\* Refer to radio interoperability list

<b>Input Voltage Range</b>	18-36 VDC or Central Unit
<b>Current Efficiency (Max)</b>	40 mA
<b>Dimensions (HxWxD)</b>	2.36 x 1.02 x 6.77 in (6 x 2.6 x 17.2 cm)
<b>Weight</b>	~2 lb (<1 kg)



### SOFT KEYPAD APPLICATION

#### Remote control access through multiple devices

The L3Harris RF-7800I-SKA Soft Keypad Application utilizes Windows® or Android™ platforms to gain remote control access of the intercom system through a smartphone, tablet or laptop. Android compatibility includes Samsung® edge devices.

- > Full system access from any remote location with LAN connectivity
- > Secure login through an IP connection allowing Type 1 wireless data waveforms
- > Feature updates including radio remote control and crossbanding

#### Supported Software

Microsoft® Windows® 7  
Microsoft® Windows® 10  
Android™



### BASIC UNIT

#### Easy access to continuous voice and data

The L3Harris RF-7800I-BU Basic Unit provides preprogrammed operation modes through a hands-free plug-and-play interface.

- > Remote radio control of L3Harris radios from Crew Station at distances of up to 2 km\*
- > Delivers continuous voice and data communications
- > Communicate urgent messages quickly and reliably
- > Ideal for executing time-sensitive, critical operations

\* Refer to radio interoperability list

<b>Input Voltage Range</b>	18-36 VDC or Central Unit
<b>Current Efficiency (Max)</b>	40 mA
<b>Dimensions (HxWxD)</b>	1.96 x 4.96 x 6.77 in (5 x 12.6 x 17.2 cm)
<b>Weight</b>	~2 lb (<1 kg)



### SPEAKER UNIT

#### High-powered broadcasting and radio monitoring

The L3Harris RF-7800I-SA Speaker Unit clearly broadcasts internal conferencing and supports radio traffic patched through the intercom.

- > 8-watt amplifier with a 6-step volume control knob
- > Public address system for users without vehicle intercom headsets
- > Simultaneously monitors all audio sources connected to the intercom via the speaker

<b>Input Voltage Range</b>	18-36 VDC or Central Unit
<b>Current Efficiency (Max)</b>	1 A max
<b>Dimensions (HxWxD)</b>	2.4 x 4.96 x 6.77 in (6.1 x 12.6 x 17.2 cm)
<b>Weight</b>	2.6 lb (1.2 kg)



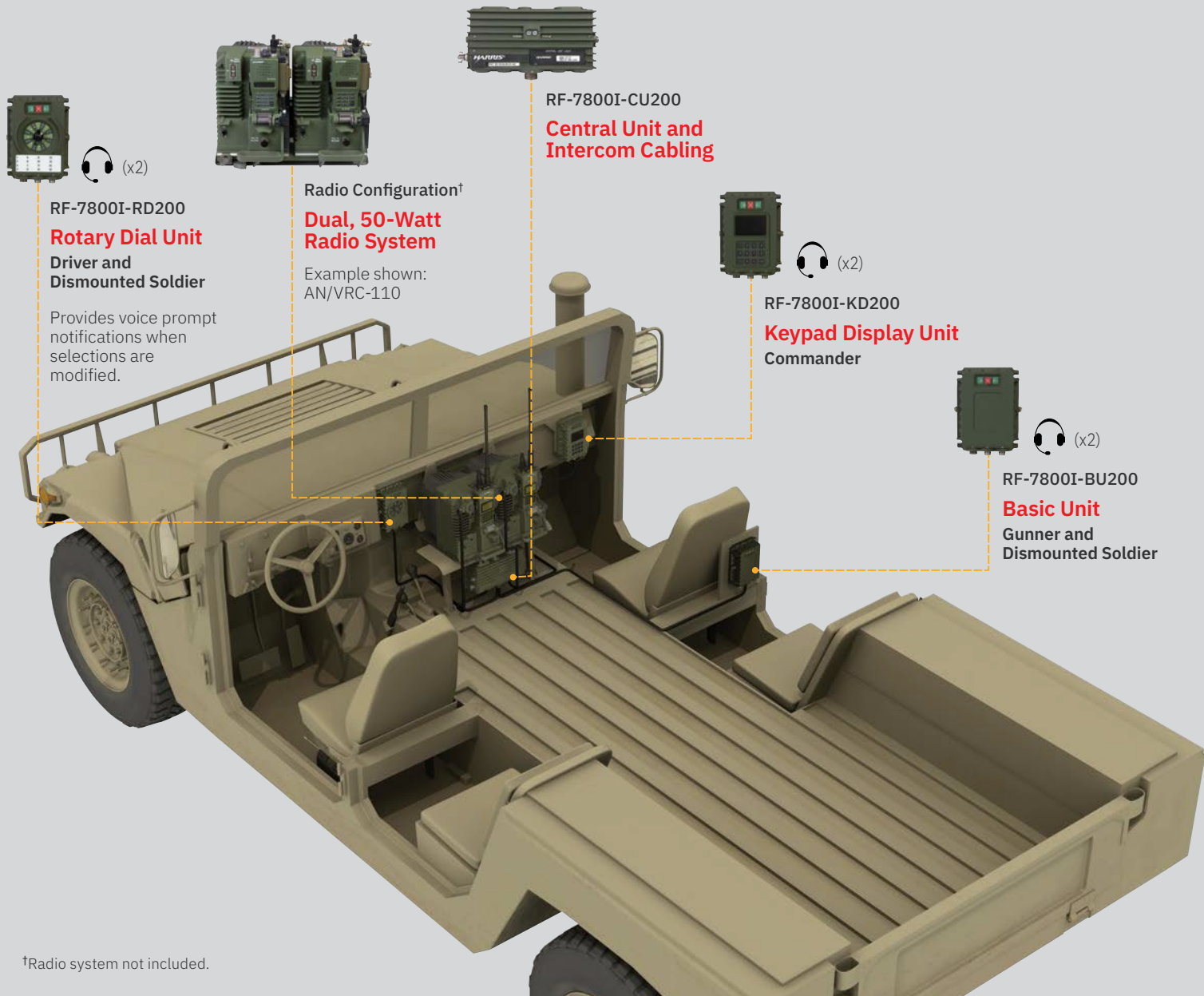
### TELEPHONE AND ALARM UNIT

#### Telephony in the field

The L3Harris RF-7800I-TA Telephone and Alarm Unit seamlessly integrates with an analog PBX or a field telephone to provide direct dialing from Crew Stations.

- > Single unit supports both incoming and outgoing calls
- > Alarm/sensor interface for monitoring vehicle warning signals including engine, NBC and IR
- > Threat conditions and vehicle issues trigger a warning broadcast and flashing red light
- > Configurable to detect GND/not connected, >>24V/not connected, and >>GND/24V

<b>Input Voltage Range</b>	18-36 VDC or Central Unit
<b>Current Efficiency (Max)</b>	100 mA
<b>Dimensions (HxWxD)</b>	1.96 x 4.96 x 6.77 in (5 x 12.6 x 17.2 cm)
<b>Weight</b>	~2 lb (<1 kg)



# LIGHT VOICE SYSTEM

## MOTORIZED INFANTRY VEHICLE

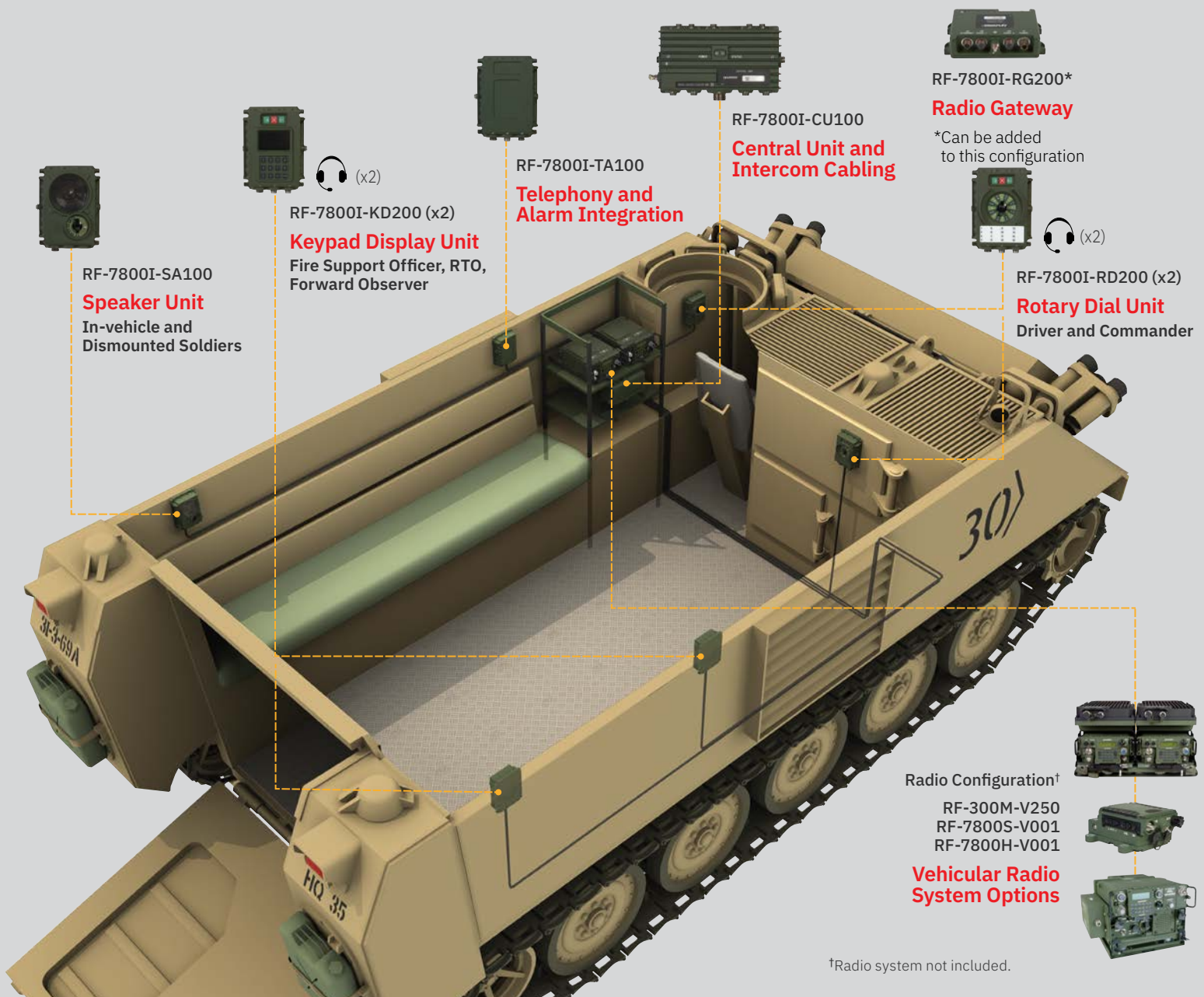
The L3Harris RF-7800I Tactical Networking Intercom System voice-only configuration provides clear voice connectivity to every crew member within the vehicle and unit for reliable up and down echelon voice communication. This system configuration provides dynamic connectivity for up to two radios and four crew stations and supports integrated radio remote control.

The battleground of the 21st century is more fast-paced than ever, making clear, reliable voice communication essential for soldier safety and mission success. Utilizing the Light Voice System, a squad leader in control of two up-armored vehicles can maintain voice communication among the motorized infantry vehicles, the company and four members of the team.



### Crew Members:

- > 1 Driver
- > 1 Squad Leader
- > 2 Crew
- > 1 Gunner



# REMOTE CONTROL, DATA AND TELEPHONY

## MECHANIZED FIRE SUPPORT VEHICLE

The L3Harris RF-7800I Tactical Networking Intercom System delivers clear, reliable voice and data connectivity to every crew member within the vehicle and unit. It also provides simple push-button set up of rebroadcast sessions to forward observers with essential radio connectivity. The system supports one-button enabling and disabling of data circuits for data relay, monitoring and path selection.

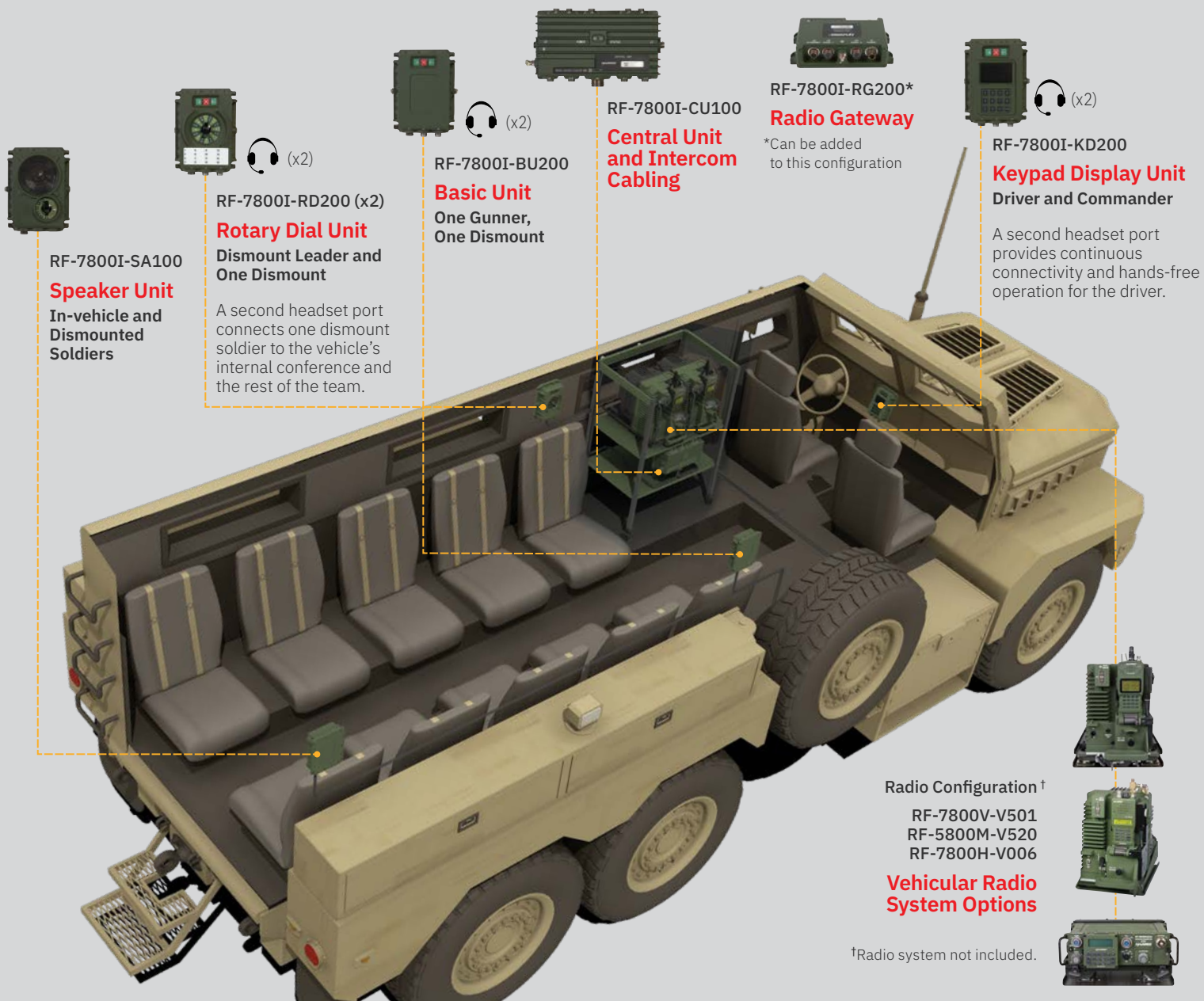
- > Integrates with analog PBX or field telephone
- > Low power consumption is instantly extendable with daisy-chain of Central Unit Bridge
- > Data connectivity through the intercom system

In addition to communications for mounted crews, the intercom system for Mechanized Fire Support Vehicles connects dismounted observers Beyond-Line-of-Sight (BLOS). The RF-7800I provides a data relay link to the remote forces, and distributes GPS information to and from a spoof-resistant receiver to the targeting laser for the fire support computer system. Local dismount units can also communicate to Support Vehicle crews via radio or tank phone, and to mobile troops through the system's integrated speaker.



### Crew Members:

- > 1 Driver
- > 1 Commander
- > 1 Fire Support Officer
- > 1 RTO
- > 1 Forward Observer
- > Dismounts



# REMOTE CONTROL AND SPEAKER

## ARMORED PERSONNEL CARRIER

The L3Harris RF-7800I Tactical Networking Intercom System provides clear, reliable voice and data connectivity to every crew member within the vehicle and at dismount. Dismounted crew can monitor radio traffic and be briefed by the vehicle commander over the Speaker Unit.

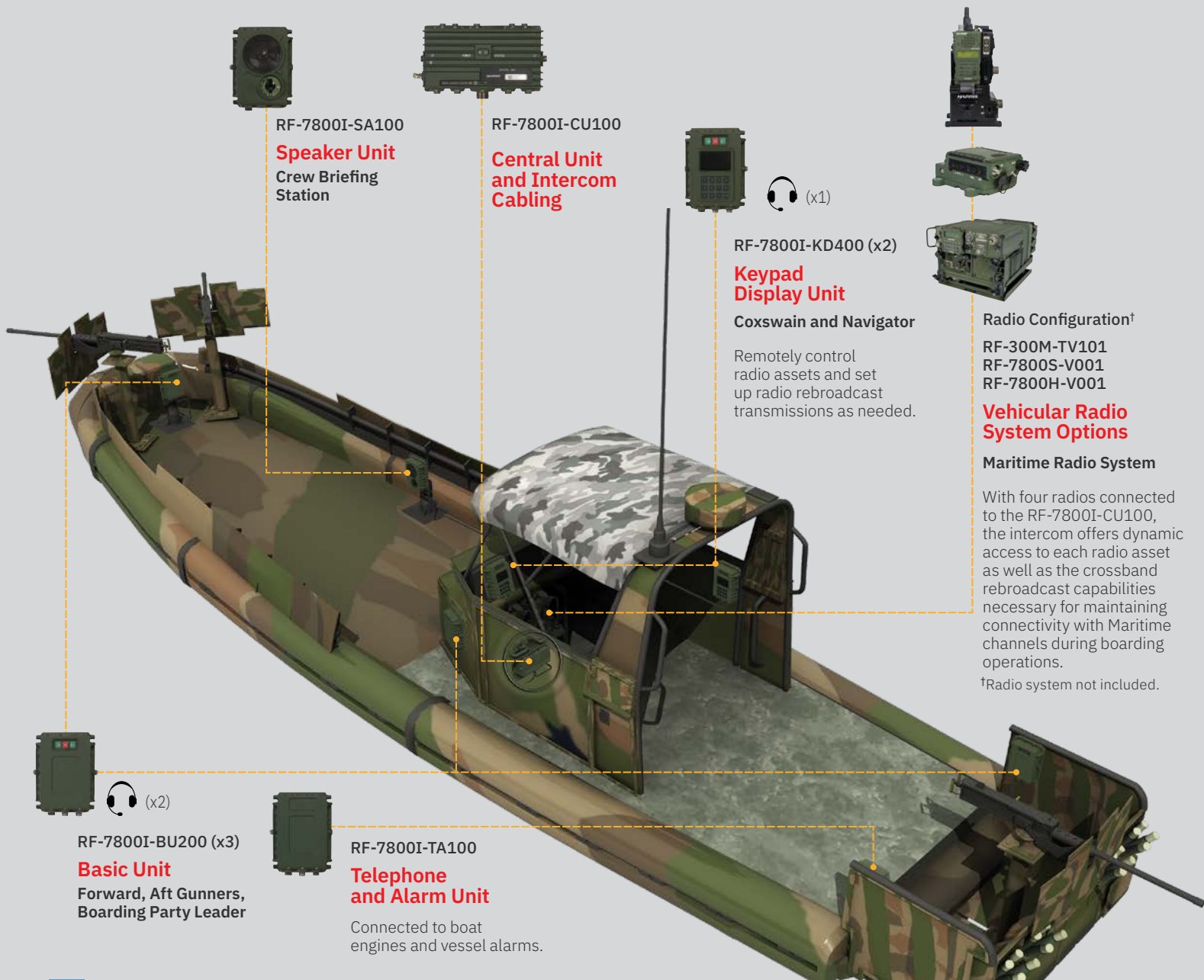
- > Instantly extendable with daisy-chain of Central Units
- > Public address through the Speaker Unit for dismounted soldiers without headsets

Today's highly evolved and mobile battlefield requires large crews to keep in constant contact with each other and command leaders whether in vehicle or at dismount. Connectivity to the squad's radio network, local tactical VHF network and calling capability on the BLOS radio network gives dismounted soldiers real-time Situational Awareness for swift and successful mission accomplishment.



### Crew Members:

- > 1 Driver
- > 1 Commander
- > 1 Gunner
- > 1 Dismount Leader
- > Dismounts



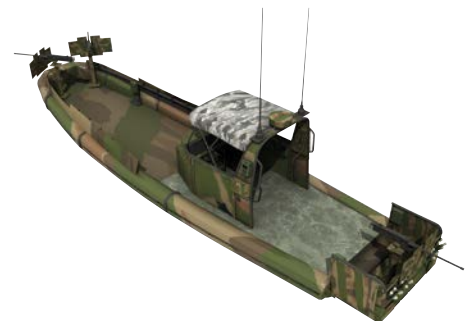
# REMOTE CONTROL AND INTEGRATED ALARMS

## PATROL BOAT

The L3Harris RF-7800I Tactical Networking Intercom System audio interface connects the crew to additional military and maritime radio assets and provides remote control access of L3Harris radios on board the vessel. The RF-7800I-TA100 telephone and alarm unit monitors the vessel's subsystems and triggers an audio/visual warning if an event occurs.





- > Instantly extendable with daisy-chain of Central Units
- > Remote control of the intercom over IP through a Software Keypad Application
- > Operates in night vision and blackout modes

River patrols and coastal interdiction missions pose numerous challenges to crews. Full Situational Awareness for all forces, including immediate access to other maritime and tactical radios is critical for mission success. Vessel subsystems must also be monitored at all times to ensure crew safety.



### Crew Members:

- > 1 Coxswain
- > 1 Navigator
- > 3 Gunners
- > Boarding Party

	<b>Light Voice System</b> Motorized Infantry Vehicle
	<b>Remote Control, Data and Telephony</b> Mechanized Fire Support Vehicle
	<b>Remote Control and Speaker</b> Armored Personnel Carrier
	<b>Remote Control and Integrated Alarms</b> Patrol Boat

EQUIPMENT LIST					
Part Number	Description	Quantity			
<b>Intercom Components</b>					
RF-7800I-CU100	Central Unit		1	1	1
RF-7800I-CU200	Central Unit Light		1		
RF-7800I-KD200	Keypad Display Unit with 2 Headset Ports		1	2	2
RF-7800I-KD400	Keypad Display Unit with 1 Headset Port and 1 RS-232 Port				2
RF-7800I-RD200	Rotary Dial Unit with 2 Headset Ports		1	2	2
RF-7800I-RD400	Rotary Dial Unit with 2 Headset Ports				
RF-7800I-BU200	Basic Unit with 2 Headset Ports		1		3
RF-7800I-BU400	Basic Unit with 2 Headset Ports				
RF-7800I-SA100	Intercom Speaker Unit		1	1	1
RF-7800I-TA100	Telephone and Alarm Unit		1		1
RF-7800I-RG200	Two-Channel Radio Gateway		1		1
<b>Headsets and Ancillaries</b>					
A06-0013-001	Bose PICVC Integrated Helmet Heavy ANR Headset		6		
A06-0015-002	Racal Under-the-Helmet Light ANR Headset		5	6	8
12106-1050-A32	Crew Station to Headset Cable		5	6	8
<b>Cabling and Mounting Solution</b>					
12109-6410-01	Central Unit Shock Mount		1	1	1
12106-1013-A010	Crew Station J1 Cable		3	5	6
12106-1072-A006	Telephone Unit to Field Phone & PABX Cable			1	
12106-1324-A002	Central Unit Distribution Cable				1
12106-1328-A002	Central Unit Distribution Cable			1	1
12106-1348-A002	Central Unit Light Distribution Cable		1		
12106-1351-A006	Crew Station to RS-232 Cable			1	1
12106-1374-A010	Alarm Unit Interface Cable			1	1
12106-1412-A006	Central Unit to RF-7800V-HH Radio Cable				1
12106-1413-A006	Central Unit to AN/PRC-117G or RF-7800M-MP Radio Cable			2	
12106-1420-A020	Central Unit to 6-Pin Audio Radio Cable				1
12106-1421-A006	Central Unit to AN/PRC-152 Radio Cable		2		1
12106-1502-A006	Central Unit to RF-7800H-MP (20 watt) Radio Cable				1
12106-1503-A006	Central Unit to RF-7800H-MP (150 watt) Radio Cable			1	1
12106-1507-A006	Central Unit to RF-5800V-HH or RF-5800M-HH Radio Cable				1
12106-1509-A006	Central Unit to RF-7800S Radio Cable		1		1
12106-2364-A010	Central Unit to Speaker Cable			1	1
<b>System Integration, Vehicle Fit</b>					
12106-2353-A006	Central Unit to Ethernet and Programming Cable		1	1	1
12109-5200-01	Power Disconnect and Filter Unit		1	1	1

Note: See your L3Harris Sales Representative for additional part numbers.

ENVIRONMENTAL	
Shock/Vibration	MIL-STD-810G, tracked and wheeled vehicles
Operating Temperature Range	-25.6°F to +122°F (-32°C to +50°C)
Storage Temperature Range	-58°F to +149°F (-50°C to +65°C)
Immersion	1 meter
Water Integrity	Humidity, salt, fog, blowing rain
EMI/RFI	MIL-STD-461F

RADIO INTEROPERABILITY	
Cables	Part Number
AN/PRC-117F	12106-1405-A006
AN/PRC-117G	12106-1414-A006
AN/PRC-150 (manpack)	12106-1501-A006
AN/PRC-150 (20 W)	12106-1502-A006
AN/PRC-150 (150 W)	12106-1503-A006
AN/PRC-150 (125/400 W)	12106-1503-A1/A2
AN/PRC-152	12106-1401-A006
AN/PRC-152	12106-1421-A006
AN/PRC-152A	12106-2480-A006
AN/PRC-158	12106-1560-A006
AN/PRC-159	12106-1561-A006
AN/PRC-160	12106-1504-A006
RF-7800H (manpack)	12106-1502-A006
RF-7800H (20 W)	12106-1502-A006
RF-7800H (150 W)	12106-1503-A006
RF-7800H (125/400 W)	12106-1503-A1/A2
RF-7800H (any config w/FW 2.0 or greater)	12106-1504-A006
RF-7800M	12106-1413-A006
RF-7800S (voice)	12106-1509-A006
RF-7800S (voice and data)	12106-2510-A006
RF-7850S (voice and data)	12106-1561-A006
RF-7800V-HH	12106-1412-A006
RF-7850M-HH	12106-1412-A006
RF-5800M-HH	12106-1507-A006
RF-5800M-MP	12106-1505-A006
RF-5800V-HH	12106-1507-A006
RF-5800V-MP	12106-1505-A006
6-Pin audio	12106-1420-A006
TVA (45 degrees)	12106-1421-A006

Note: See your L3Harris Sales Representative for additional part numbers.

The RF-7800I is manufactured by L3Harris under license from WB Electronics.

#### RF-7800I Tactical Networking Intercom System

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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

